Aircraft vs. How to Win

by Charles D. Lovell and LCdr. Verne Stella

Why are we hitting so many birds? Since 1986, bird strikes have caused nearly a half-billion dollars damage to USAF aircraft, as well as 33 fatalities. On average, USAF aircraft have 2,500 bird strikes per year, most of which occur during fall and spring migration. About 70 percent of all USAF bird strikes are below 1,000 feet AGL. The Navy reported about 620 strikes for 1993-1995. Nineteen of those were mishaps, totaling $104 millon.

Populations of many species have rebounded dramatically since the banning and control of DDT and other pesticides in the 1970s. With help from Ducks Unlimited, state and federal wildlife agencies, and other organizations, waterfowl populations are growing. The U.S. Fish and Wildlife Service (USFWS) predicted that in the fall of 1996, approximately 83 million ducks would migrate across the U.S., an increase of 8 percent over last year. The USFWS also estimated that there were nearly 38 million ducks in 1996, while estimates in 1989 were only about 25 million.

Twenty-six percent of reported bird strikes occur along low-level training routes and ranges. We can't eliminate bird strikes, but we can reduce the number of them. The Air Force's Bird Avoidance Model (BAM) predicts the probability of hitting birds in a particular area of the country by month and time of day. It helps locate the largest concentrations of birds.

The Air Force developed the model in the early 1980s. It is based on data about specific waterfowl (ducks, geese, and swans) and raptor (hawks and vultures) populations, because these species cause the majority of bird-strike damage.

According to the Air Force's Bird Aircraft Strike Hazard (BASH) Team, the BAM has helped to reduce bird strikes up to 70 percent.

How do you get this model? Well, you can't, yet. However, you can send your requests to LCdr. Stella at the Naval Safety Center. We have approximately 200 routes and MOAs on file. The fax number is (757) 444-7049 (DSN 564); or phone (757) 444-3520, ext 7281 (DSN 564). LCdr. Stella's e-mail address is lstella@safecen.navy.mil. Within 3 to 4 weeks you will receive BAM evaluation printouts from the Safety Center.

To win the war on bird strikes, the Air Force is developing a geographic information system (GIS)-based BAM that will contain far more bird species, current population and migration data. This new survey will be available for you to use on your PC in two years.

The Naval Safety Center, working with the Air Force BASH Team, NavFac and Clemson University, has begun a pilot program to monitor spring migration using the WSR-88D weather radar. This project

Birds - the War

will provide timely warning of bird movements in and around the air station, just like you receive weather updates prior to flight.

If you know where the birds are concentrating during migration, you may be able to avoid flying in these areas for that short season. By scheduling flights around periods of peak bird activity and by keeping birds off our air bases, we can learn to share the skies with our feathered friends.

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Number and Type of Aircraft in BASH Mishaps by Class

Alpha	Bravo	Charlie	
$1M or more	**$300K-$1M**	**$10K - $299K**	
AV-8 4	AV-8 3	FA-18 . 16	VP-3 6
F-18 2	A-6E 1	T-2 4	A-4 ... 13
EA-6B 1	FA-18 3	A-6 17	A-7 2
	E-2C 1	F-14 5	AV-8 .. 13
		C-130 .. 1	C-9 2
		F-4 2	EA-6B .. 5

Bird Strikes That Caused Mishaps Navy/Marine Aircraft CY86-96

The cost for the 105 strikes was $179,067,373.00 and one death. The Alpha mishaps were lost aircraft.